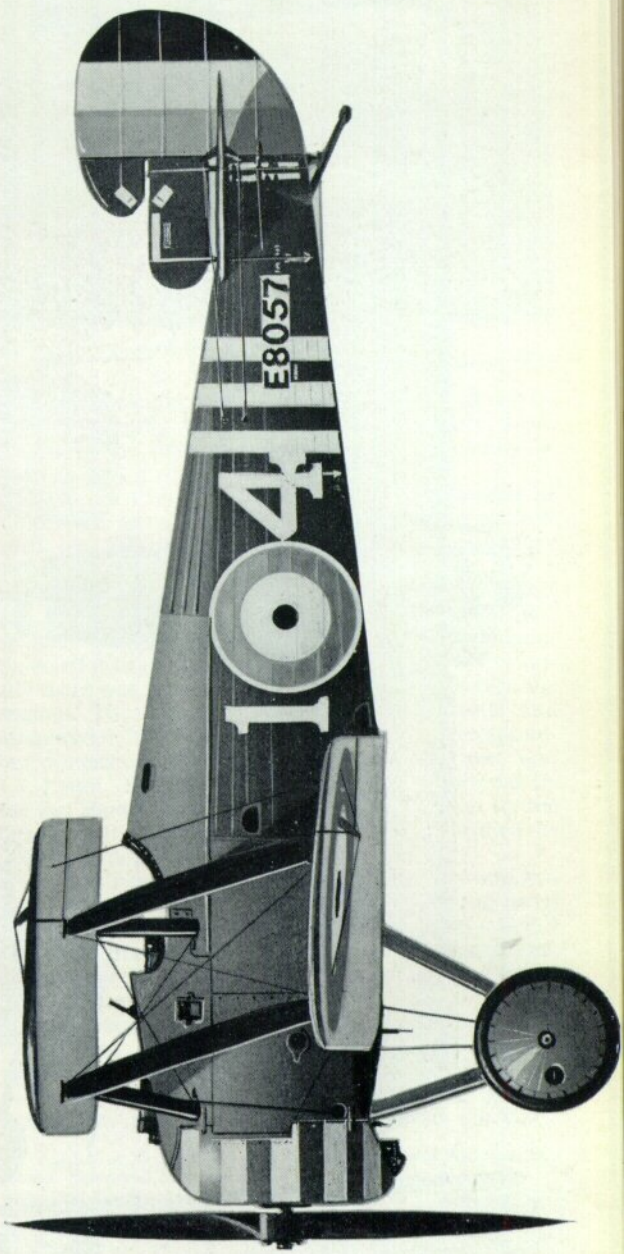
PROFILE PUBLICATIONS

The Sopwith 7F.I Snipe



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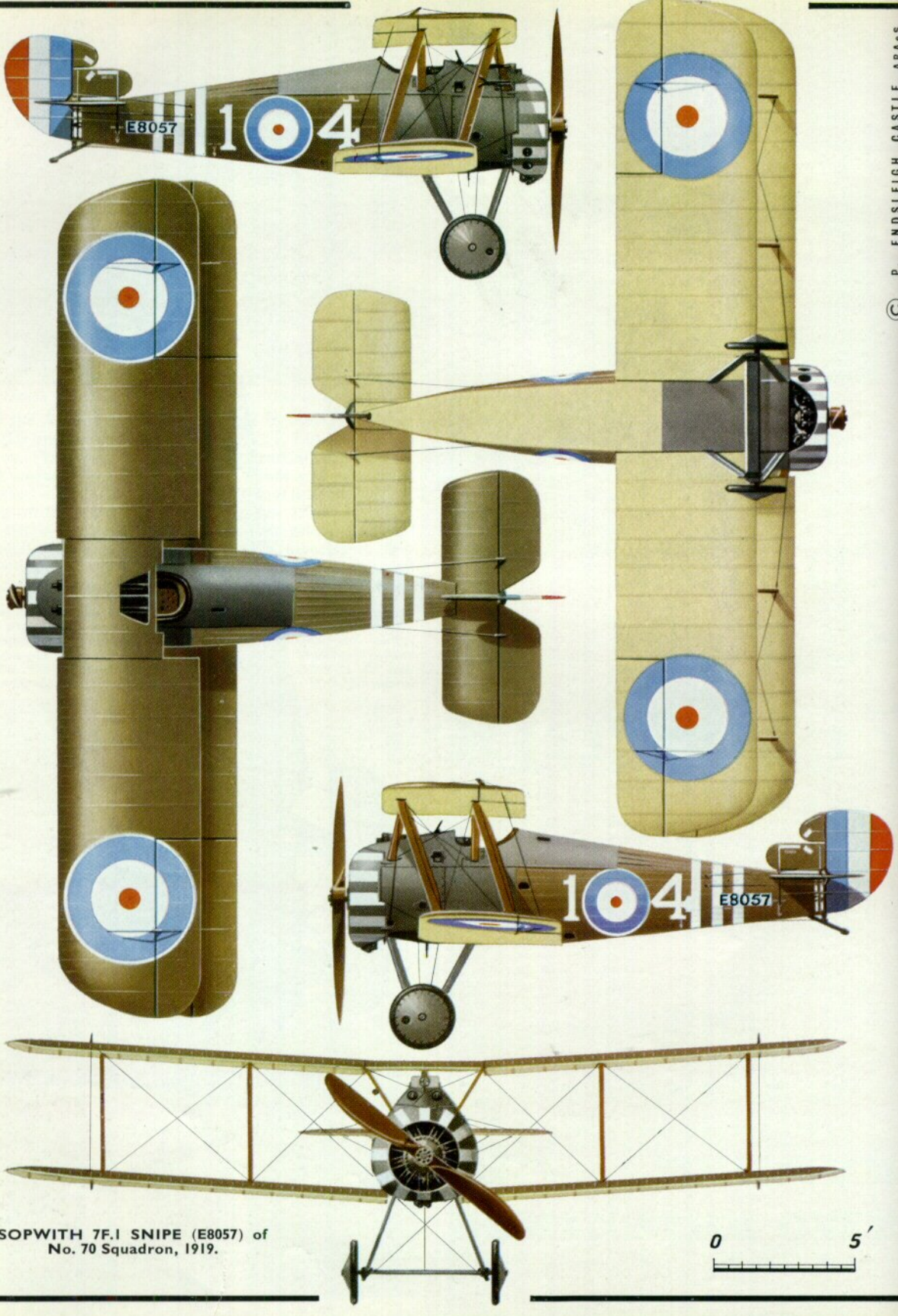

SOPWITH 7F.1 SNIPE (E8057) of
No. 70 Squadron, 1919.

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The Sopwith 7F.1 Snipe

by J. M. Bruce

Final standard production form of the Snipe, with large fin and rudder and horn-balanced ailerons. The aircraft is E8184. (Photo: Hawker Siddeley Aviation Ltd.)

An early description of the Sopwith Snipe in an official handbook begins: "This machine is a modification of the type F.1 (Camel) and has also points of similarity with the 80 Le Rhône type". Although it would be inaccurate to describe the original conception of the Snipe as a modification of the Camel it was clearly a development of the earlier type.

The original design was a small, compact, single-bay biplane in which considerable trouble had been taken to give the pilot a better view than he had on the Camel, yet without resorting to the radical layout of the Dolphin. Both wings had equal dihedral; the pilot sat immediately behind the rear spar of the centre section and high enough in the deep fuselage to see over the upper wing. The fin and rudder were identical with those of the Camel, and the tailplane and elevators resembled their counterparts on the earlier type.

It was intended that the Snipe should be able to make use of any of the standard Camel power units, and an early design drawing (which is dated 14th August 1917) lists the 150-h.p. B.R.1, 150-h.p. Gnome Monosoupape, 130-h.p. Clerget 9B or 110-h.p. Le Rhône as the intended alternative engines. At this early stage the possibility of fitting a large spinner much like that of the Bristol M.1C was considered, but the first prototype emerged in the late summer of 1917 with a 150-h.p. B.R.1 engine in a conventional open-front cowling.

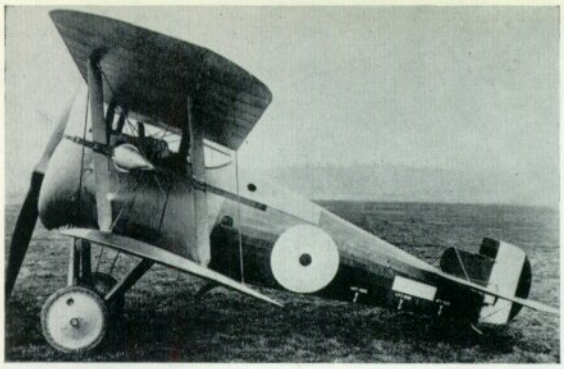
Contract No. A.S.31668/17 was given to the Sopwith company for the construction of six prototypes, to be numbered *B9962–B9967*. So far as can be determined only three aircraft actually wore serial numbers; the first prototype did not, originally at least, display a number.

W. O. Bentley had designed the B.R.2 engine at almost the same time as the B.R.1 but had to wait until the 150-h.p. engine proved itself satisfactory before authority was given for prototype B.R.2 engines to be made. Whereas the bore of the B.R.1 was 120 mm. and its stroke 170 mm., the B.R.2 cylinder was 140 mm. × 180 mm. and its designer expected it to produce more than 200 h.p. Dimensionally there was surprisingly little difference between the engines. The B.R.1 was 1,064 mm. in diameter and measured 1,105 mm. from front to rear; corresponding dimensions for the B.R.2 were 1,082 mm. and 1,131 mm. Three B.R.2 prototypes were ordered by the Air Board in April 1917; the first was run on the bench at the beginning of October and fulfilled its designer's hopes by delivering 234 h.p.

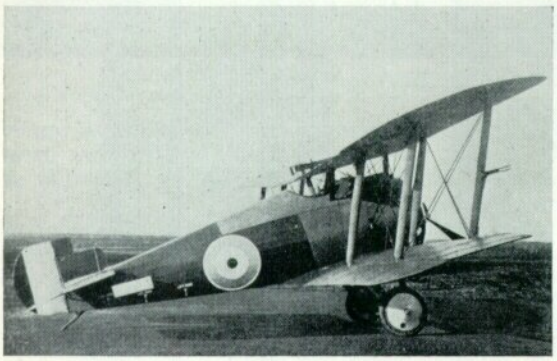
A Snipe prototype of the original configuration was fitted with a B.R.2 engine and later wore the serial number *B9963*. So closely did it resemble the B.R.1 prototype that it may have been merely a modification or reconstruction of the first aircraft. It arrived at Farnborough on 23rd November 1917.

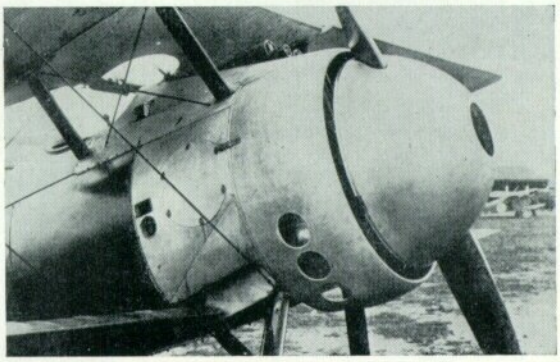
Performance was enhanced by the more powerful engine but the greater torque reaction brought problems of directional control. The Camel rudder had been barely adequate on the Camel, and its inadequacy became more pronounced on the B.R.2

Left: *The first prototype Snipe, fitted with the 150-h.p. Bentley B.R.1 engine, at Brooklands, 1917.* (Photo: Royal Aeronautical Society). Right: *Prototype with 230-h.p. Bentley B.R.2 engine.*



Left: *Revised single-bay Snipe with faired fuselage, new tail unit and wide-span centre section.* Right: *The Snipe in which Major W. G. Barker fought the action for which he was awarded the Victoria Cross, photographed shortly after being retrieved from the spot where it crashed. The fuselage is now preserved in the Canadian War Museum.* (Photos: Imperial War Museum)





Left: *Two-bay prototype* B9965 *with Lewis gun on centre section, at Martlesham Heath, February 1918.* Right: *After its return from France,* B9965 *was fitted with a large spinner and modified engine cowling.*

Snipe. The next prototype to emerge therefore incorporated a completely new vertical tail assembly, and the main airframe was also extensively altered.

The single-bay wings were retained but the centre section was widened; this meant that the centre-section struts diverged when seen in end elevation instead of being vertical as on the original B.R.1 and B.R.2 aircraft. The upper wing panels were correspondingly shortened in span and the clear-view cut-out in the centre section was considerably smaller than the corresponding aperture on the earlier form of the design. The aerodynamic form of the fuselage was improved by fairing the sides; the stringers ran back as far as the penultimate vertical spacer on each side. This modification enhanced the appearance and performance of the aircraft and probably improved the airflow over the tail surfaces. The underside of the fuselage remained flat. An enlarged horn-balanced rudder was fitted, together with an unusually small fin of very low aspect ratio.

This Snipe prototype was tested at Martlesham Heath in December 1917, its B.R.2 driving a Lang airscrew type L.P.4000. Its performance was good but not spectacularly better than that of the F.1 Camel with B.R.1 engine. The recorded figures are those reproduced in the performance table and were achieved with a military load of only 86 lb., representing the two Vickers guns and only half the Camel's load of ammunition. No serial number was painted on this aircraft, but it was obviously considered to be *B9964.*

It has been said that two-bay wings had to be fitted to the Snipe because the original single-bay bracing was not strong enough. A single-bay Snipe airframe was tested to destruction in January 1918, when the main planes proved to have a load factor of 6·84 under flight load and 5·44 under down load. The corresponding values for the Camel had been 6·86 and 4·15. The single-bay Snipe therefore appears to have been at least as robust as the Camel.

It is much more likely that the fitting of two-bay wings was dictated by a need for greater wing area to enable a heavier military load to be carried. Air Board Specification A.1(a) for single-seat tractor aircraft, drawn up as early as April 1917, demanded performance that, at that time, was impossible of achievement with all the specified equipment, but all the manufacturers who produced prototypes to meet the requirements attempted to provide the stipulated armament, viz.: "two synchronised guns firing through propeller and 750 rounds (140 lb.), one pivoted gun firing upward and 250 rounds (52 lb.)". Oxygen apparatus and a piece of armour plate behind the cockpit were also specified; the speed was to be not less than 135 m.p.h. at 15,000 ft., the ceiling not less than 25,000 ft. The specification contained the concession that: "If this performance cannot be obtained with the specified load, the pivoted gun and 250 rounds may be omitted, but it is pointed out that the ammunition for the synchronised guns is considered as important as fuel".

The next Snipe prototype, *B9965*, had the same fuselage and tail unit as its immediate predecessor but was fitted with two-bay wings of 30-ft. span. Its airscrew was a Lang L.P.4040, which was subsequently standardised for the Snipe. This aircraft was

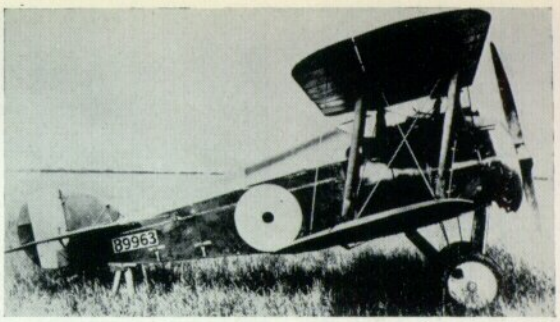
the subject of the Martlesham trial reports M.176 and M.176A dated February 1918 and M.176B of April 1918. During these tests it was flown with a Lewis gun mounted on the rear spar of the centre section, to the starboard side of the cut-out; a total of 235 lb. of ammunition was carried for the three guns. With this load performance was rather poorer than the figures recorded for the much more lightly loaded *B9964*.

It is of interest to record the notes on *B9965* that appeared in the report:

> "The fighting qualities of this machine cannot be fairly criticised, as it is understood that at present it is wrongly rigged; the machine is now nose heavy on turns and has too little rudder control. The makers intend to bring the top plane back a certain distance and alter the incidence on the tail plane. The downward, outward and forward views are excellent, the only blind spots being below the bottom planes. The facilities for fire are good in the case of the Vickers guns, but the Lewis gun, as at present mounted, is practically impossible to use, being too close to the pilot's head. The chassis is high and narrow for this type of machine and, on rough ground, or in a high wind, the wing tips are liable to touch the ground. The height is an advantage as it conduces towards slow landing, but, if the height is maintained, then the width must be increased. When flown with hands off control stick and engine on, the machine stalls and spins; with engine off, it will nose-dive."

The first series of Martlesham tests of *B9965* ended on 23rd February 1918, and on 13th March this prototype went to France for operational evaluation. No time was lost in putting it through its paces: shortly after its arrival at No. 1 Aeroplane Supply Depot, St. Omer, Lt. L. Hollinghurst took it to 24,000 ft. in 45 minutes. Lt.-Col. H. A. Van Ryneveld, M.C., flew *B9965* on 18th March and reported it to be "vastly superior to any scout at the front . . . quickly manœuvrable and easy and slow to land".

After its return to England *B9965* was fitted with a large spinner and modified engine cowling: the combination was somewhat different in shape from the earlier installation envisaged on the layout drawing of August 1917. As on the Bristol M.1c, the spinner had a large central opening. Thus modified, the aircraft returned to Martlesham and was flown quite extensively. It was reported to be at Farnborough on



The B.R.2-powered prototype wearing the serial number B9963. (Photo: Imperial War Museum)

On B9966 *the design of the fin and rudder was again revised and an adjustable tailplane was fitted.*

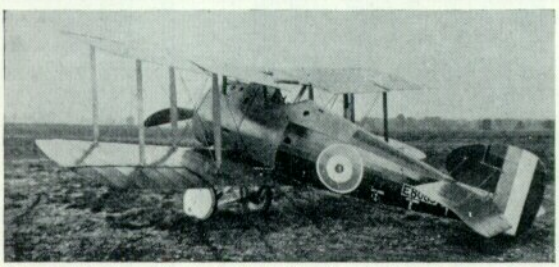
2nd July 1918, but it is not known whether it still had the spinner at that date.

Development of the Snipe continued with *B9966*. This aircraft was very similar to *B9965* and also had provision for a Lewis gun on the centre section. On *B9966* the fin and rudder were slightly different in outline, and (perhaps inspired by the Martlesham criticism) there was the important innovation of an adjustable tailplane, the incidence of which could be varied in flight by means of a simple mechanism actuated by a handle in the cockpit that slid fore and aft on a bar mounted on the upper starboard longeron; the range of incidence was from 1 deg. 20 min. to

The third production Snipe built by the Sopwith company, E7989, *with the first production form of fin and rudder.* (Photo: Hawker Siddeley Aviation Ltd.)

Snipe of the first production form with bomb rack under the fuselage, believed to be of No. 43 Squadron, R.A.F.

The prototype B9966 *at Martlesham Heath, fitted with modified tail unit and balanced upper ailerons. These forms of fin, rudder and upper ailerons were adopted as standard on later production Snipes.* (Photo: Imperial War Museum)



Snipe with Sopwith Dolphin tail unit, at Martlesham Heath.

5 deg. 50 min. The Sopwith designation 7F.1/5 was sometimes applied to *B9966*.

This prototype was tested at Martlesham in June 1918, by which time production had been initiated. The Snipe had been selected for large-scale production in preference to the competitive Boulton & Paul Bobolink and Nieuport B.N.1. Seven contracts, dated 20th March 1918, for a total of 1,700 Snipes were allotted as follows:

Manufacturer	*Contract No.*	*Serial Nos.*
Sopwith	35A/432/C300	*E7987–E8286*
Boulton & Paul	35A/436/C303	*E6137–E6536*
Coventry Ordnance Works	35A/437/C304	*E6537–E6686*
Napier	35A/434/C302	*E6787–E6936*
Nieuport & General	35A/435/C305	*E6937–E7036*
Portholme Aerodrome	35A/431/C299	*E8307–E8406*
Ruston Proctor	35A/433/C301	*E7337–E7836*

Deliveries began in the summer of 1918. The first Sopwith-built production Snipe, *E7987*, was sent to Martlesham where it was the subject of the official trial report No. M.223 in August. Even with its engine specially tuned to deliver 245 h.p. its performance was only comparable with that of *B9965*, which had had the additional load and drag of its Lewis gun.

The Lewis gun was abandoned on the production Snipe, and the aircraft differed in certain respects from the prototypes. A new, larger rudder was fitted and the cut-out in the centre section was enlarged. Internally, the shape of some structural members was altered, the design of some fittings was improved, and an enlarged combined gravity and oil tank of revised shape was fitted behind the engine. Oxygen equipment and electrical heating apparatus were standard fittings. By the end of September 1918 a total of 161 Snipes had passed final inspection.

The first unit to be equipped with the Snipe was No. 43 Squadron, R.A.F., which made its first operational sortie with its new aircraft on 23rd September 1918. During the seven weeks of war that remained No. 43 did a good deal of escort work, notably of the D.H.9s of No. 107 Squadron.

During the second and third weeks of October, No. 4 Squadron, Australian Flying Corps, exchanged its Camels for Snipes. Nine of No. 4's Snipes joined battle with fifteen Fokkers near Tournai on 26th October; one Fokker was shot down in flames, another was sent down badly damaged and three more were driven down out of control. Two days later ten of No. 4's Snipes destroyed all six Fokkers of an enemy flight they attacked over Ath. The Australians found the Snipe to be an excellent fighter and had a considerable number of combat successes in the crowded few weeks that preceded the Armistice. A post-war Sopwith advertisement claimed that "In four days a single Snipe squadron accounted for 36 enemy aeroplanes and downed 13 in one day". That may well have been a reference to No. 4 Australian Squadron.

The only other operational unit to receive the Snipe before the Armistice was No. 28 Squadron, R.A.F., which exchanged its Camels for the new type in October 1918. The war ended before No. 208 was able to exploit its Snipes to the full.

In its flying qualities the Snipe was very different from the Camel. Although manœuvrable it was much less sensitive and did not have the lightning-swift response of its fiery little predecessor. For this reason some pilots did not take kindly to the Snipe when it was introduced. Nevertheless it came to be used effectively as an exhibition aircraft for aerobatics in the post-war years.

In the few short weeks of operational flying that the Snipe was able to complete it secured a place in military aviation history as the aircraft in which, on 27th October 1918, Major W. G. Barker fought the surpassingly gallant single-handed action that earned him the Victoria Cross. He had been attached to No. 201 (Camel) Squadron since 17th October and

The last Snipe prototype, B9967, *with 320-h.p. A.B.C. Dragonfly I engine and lengthened fuselage.*

B9967 *at Farnborough in March 1919 with modified Dragonfly installation. The guns had been removed by the time this photograph was made.* (Photo: Crown copyright)

had flown three uneventful operational sorties on his Snipe, *E8102*, on 21st, 22nd and 23rd October. At about 8.30 a.m. on the 27th he had shot down a German two-seater near the Forêt de Mormal when he was wounded in the right thigh by a Fokker D VII. Spinning down, he pulled out in the middle of a group of about 15 Fokkers of which he shot down one in flames. Wounded again in his left thigh, he fainted and his Snipe fell out of control. When he regained consciousness he found himself the target of another formation of 12–15 enemy fighters, but shot one down in flames before being wounded in the left elbow. Again he fainted; again on coming round he was attacked by a third enemy formation; again he shot an enemy fighter down in flames before diving away. He broke through a final group of eight German aircraft before bringing his Snipe down near a British observation balloon.

The fuselage of Barker's Snipe is today preserved in Canada. Its serial number was usurped in some mysterious way by another Snipe that was erected at Camp Borden, Ontario, on 24th June 1921.

Barker's aircraft, like the great majority of operational Snipes, had plain ailerons, the small low-aspect-ratio fin, and the standard horn-balanced rudder. A test report (M.226 of 22nd August 1918) on *E8006* stated: "Directionally there is a tendency to swing to the left, but rudder control is ample. Lateral control, not so quick as could be desired." Efforts to improve all control responses were made, and the fifth prototype, *B9966*, was flown at Martlesham with experimental control surfaces. A re-designed rudder, an enlarged fin of 2·75 sq. ft. and horn-balanced upper ailerons with slight inverse taper were fitted. The horizontal tail surfaces were completely revised: the elevators were inversely tapered and horn-balanced, and the triangular tailplane was in two parts. By this time *B9966* had acquired a production-type centre section.

A Sopwith-built production Snipe fitted with a Sopwith Dolphin tail assembly was also flown at Martlesham. This aircraft was probably roughly contemporary with the modified *B9966*.

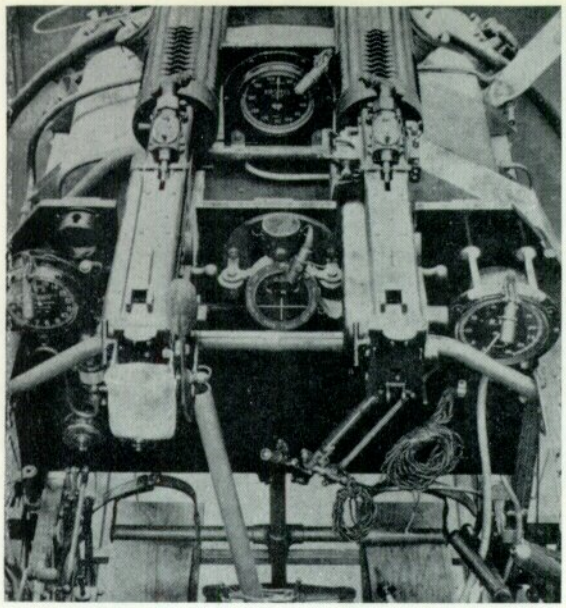
The revised fin, rudder and upper ailerons tested on *B9966* were adopted as standard but the experimental tailplane and elevators were discarded. The last hundred or so of the first Sopwith batch of Snipes and all subsequent Sopwith-built aircraft embodied these

F2341 *had the final form of fin and rudder but retained plain ailerons on its upper wings. The aircraft is here seen at Aulnoy, France, late in 1918, with a 112-lb. bomb under the fuselage.*

modifications, as did most of the Snipes built by other contractors. The modified production aircraft began to appear in November 1918 and some had reached France before hostilities ceased.

It was apparently intended that the Snipe should replace the Camel on every operational duty that the earlier type had performed. Shipboard duties were envisaged, and two Snipes were reported to be with the Grand Fleet and Northern Patrol on 31st October 1918. These may have been *E8111* and *E8112*, which were allotted to the Royal Navy. With the hazards of oversea flying in view *E8068* was fitted with a hydrovane and jettisonable wheels and was tested at the Isle of Grain; it was successfully ditched on 19th October 1918. The hydrovane installation weighed 23 lb. and took 9 m.p.h. off the Snipe's speed at 14,000 ft. The ending of the war did not put an immediate end to the experiments, for *E8085* was fitted with slinging and flotation gear in July 1919. An echo of the Grain experiments occurred some five years later, when *E6611* was fitted with deck-landing arrester-gear hooks.

On 31st October 1918 one Snipe was with the VI Brigade for Home Defence duties. The type was



Cockpit of a standard production Snipe.

found to be satisfactory for night flying and it was decided to re-equip all Camel H.D. squadrons with the Snipe from January 1919 onwards. For these duties the Snipe was fitted with navigation lights and flare brackets. Home Defence squadrons known to have received at least some Snipes were Nos. 37, 78, 112 and 143. Nearly all of these aircraft arrived after the Armistice, and the units to which they were allocated were soon disbanded.

Two Snipes had joined the Independent Force, R.A.F., by the end of October 1918 and must have been with No. 45 Squadron at Bettoncourt. This squadron had been transferred from Italy to provide a fighting escort for the bombers of the Independent Force. It joined the VIII Brigade on 22nd September 1918, but Major-General Sir Hugh Trenchard decided not to use No. 45 Squadron until its Camels had been replaced by special long-range Snipes. This version of the Snipe had an endurance of 4½ hours, the extra tankage being provided by fitting an enlarged main tank shaped to form the pilot's seat. The long-range Snipe was given the official designation Snipe Mk. Ia; the standard Snipe was the Mk. I. One official document describes the Snipe Ia as a stop-gap type, suggesting that it may have been intended to be an interim fighter pending availability of the Martinsyde Buzzard Ia. A Snipe Ia was tested at Martlesham in November 1918; it was fitted with both the standard L.P.4040 airscrew and another Lang type, L.P.5300.

The final Snipe prototype, *B9967*, had been fitted with a 320-h.p. A.B.C. Dragonfly, a new nine-cylinder radial engine of which great things were expected but which was to prove to be the greatest aero-engine disappointment of its time. The installation had been completed by the end of April 1918 and the aircraft went to the R.A.E., Farnborough, on 11th May. The fuselage of *B9967* was lengthened by 1 ft. 10 in. but the fin and rudder were of the same design as those originally fitted to *B9966* and the aircraft retained these at least until March 1919 when, with guns removed and its engine installation modified, it was still at Farnborough.

It was decided to produce the Dragonfly Snipe in quantity with the new name Dragon. A further Snipe, *E7990*, was fitted with a Dragonfly in January 1919 to become the true prototype Dragon. This aircraft had the lengthened fuselage and the final form of fin and rudder but retained plain ailerons on the upper wing. It seems that the aircraft numbered *F7001–F7030*, ordered as Snipes under Contract No. 35A/1440/C1520 dated 3rd June 1918, were delivered as Dragons; the batch *J3617–J3916* were to be built as Dragons but it is doubtful whether all were completed. The production Dragons had horn-balanced upper ailerons and the range of movement of the adjustable tailplane was from 0 deg. 10 min. to 3 deg. 50 min.

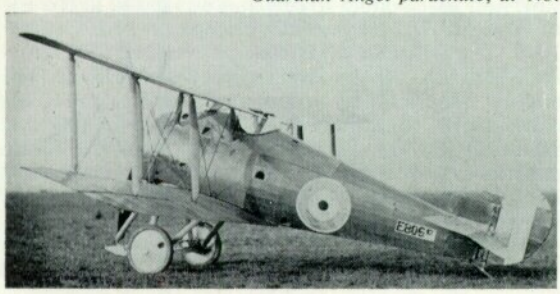
Another alternative engine for the Snipe was the 200-h.p. eleven-cylinder Clerget 11Eb rotary, an example of which was fitted to *F2340*. This was probably intended as a form of insurance against any failure of the B.R.2 production programme. The Armistice removed the need for development of the Clerget Snipe; *F2340* was reported to be at the R.A.E., Farnborough, on 1st January 1919.

Had the war lasted longer British aircrew might have had parachutes. It was intended that Snipes would be fitted with the Calthrop A.1 Guardian Angel parachute, and *E8137* was used in experiments. A much enlarged top decking was fitted behind the cockpit to house the parachute.

Greatly expanded production of the Snipe had been authorised in the summer of 1918. Two hundred more (*F2333–F2532*) were ordered from the Sopwith company on 25th April, followed by *H4865–H5064* on 9th August; and in July, August and September seven contracts for a further 900 Snipes were allotted to other contractors. Of these, 150 would not have been built as Snipes: *H8513–H8662*, ordered from Nieuport & General under Contract No. 35A/2739/C3053, were begun as Nighthawks. Other contracts were awarded later in 1918.

Production was drastically curtailed with the Armistice. Manufacture of Snipes in the batches *J451–J550*, *E7337–E7836* and *H351–H650* was

Left: E8068 *fitted with hydrovane for ditching trials at Isle of Grain, October 1918.* Right: E8137, *modified for trials of Calthrop Guardian Angel parachute, at No. 1 (Southern) Aeroplane Repair Depot.*



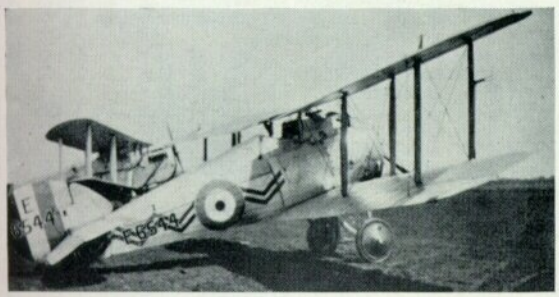
Snipe F2390 *of No. 37 Squadron equipped for night fighting, at Biggin Hill, 1919. Flare brackets and navigation lights were fitted and a wind-driven generator can be seen on the forward starboard undercarriage leg.*
(Photo: Ministry of Defence)

required to cease on 29th January 1919, and doubtless this applied to other contractor-built Snipes; production of Snipes ordered from Sopwith was to cease on 1st March 1919.

The Snipe remained in service with the R.A.F. in the post-war years. No. 43 Squadron, R.A.F., and No. 4 Squadron, A.F.C., took their Snipes to Bickendorf after the Armistice for service with the Army of Occupation. The Australian unit had relinquished its Snipes by the end of February 1919; some at least were given to No. 70 Squadron, R.A.F., which flew Snipes from Bickendorf in 1919.

At least one Snipe went to Russia with the R.A.F. contingent in 1919 and operated from Bereznik on the River Dwina.

In the lean years after the war R.A.F. fighter squadrons were formed, often as single flights initially, with Snipes as their equipment. When No. 56 Squadron was re-formed from No. 80 Squadron at Abu Qir, Egypt, in February 1920 its Snipes were given a squadron marking that recalled those of 1917–18.



The Snipe was the first R.A.F. fighter aircraft to bear the colourful markings of the inter-war years. This is E6544 *of No. 17 Squadron.* (Photo: Ministry of Defence)

E7990 *was modified to become the prototype Sopwith Dragon. Its engine was a 360-h.p. A.B.C. Dragonfly Ia, and it differed from* B9967 *in having the final production type of fin and rudder. Production Dragons had horn-balanced upper ailerons.*
(Photo: Imperial War Museum)

It had been decided in September 1921 to standardise the Snipe, Dragon and Salamander as R.A.F. fighters. By that time, however, the protracted efforts devoted to trying to make the A.B.C. Dragonfly usable had to be accepted as fruitless and the Dragon never entered squadron service; it was officially declared withdrawn in April 1923.

Snipes were placed on an operational footing during the Chanak crisis of 1922, when one flight of No. 56 Squadron was sent to Turkey to accompany the Bristol Fighters of No. 208 Squadron. On 23rd September four Snipes and two Bristols flew over Constantinople as a demonstration. No. 25 Squadron brought its Snipes to Turkey soon afterwards and remained there until 22nd September 1923.

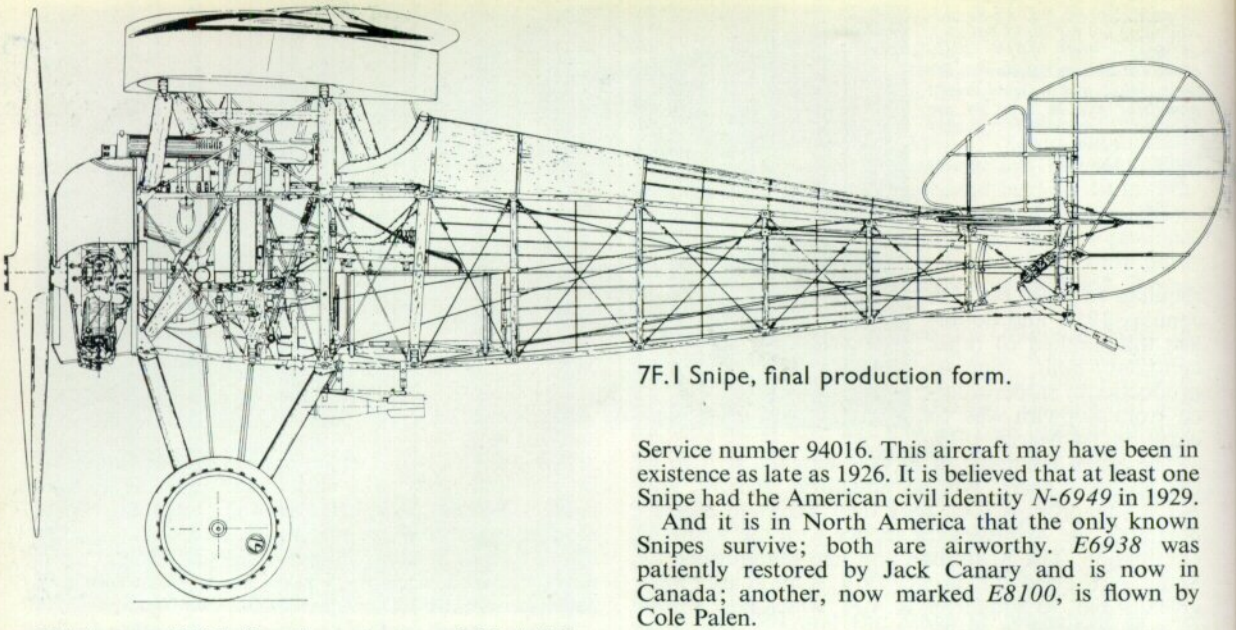
In Iraq the Snipes of No. 1 Squadron were in action against rebel tribesmen in May 1925. This squadron did not part with its Snipes until December 1926. Re-equipment of other Snipe squadrons had begun in 1924, when Nos. 25 and 56 received Grebes, Nos. 41 and 111 Siskins. The Snipe was withdrawn in 1927.

Most of the Snipe squadrons had at least one two-seat Snipe on their strength for instructional purposes; some, such as Nos. 3, 17, 41 and 111, had two. The Sopwith company had designed a two-seat version of the Snipe early in 1919; the design drawing is dated 7th February 1919. The second cockpit was formed immediately behind the normal cockpit of the single-seater. No armament was fitted. On service Snipe two-seaters the rear cockpit was often cut rather wider than was envisaged on the Sopwith drawing.

A two-seat version of the Dragon was also designed in April 1920. This would have had the larger opening for the rear cockpit, behind which a head-rest was to be fitted. It is not known whether this variant was built.

Few Snipes were used outside R.A.F. squadrons. Only five found their way on to the British civil register; of these, three (G-EAUU, 'UV and 'UW, respectively *J459*, *J453* and *J455*) were entered for the 1920 Aerial Derby, flown on 24th July.

In July 1920 it was reported that there were four Snipes in Canada. Three had been presented to Canada in February 1919 as part of a gift subscribed for by the Overseas Club and Patriotic League, and one was later included among the 107 aircraft sent to Canada as the Imperial Gift. It is uncertain whether these two groups of four Snipes were wholly identical. One of the aircraft presented in February 1919 must have been *E8213*, which was lent to H. G. Quigley for the 1919 Toronto–New York air race but crashed on



7F.1 Snipe, final production form.

25th August 1919 before the contest was held. A Snipe bearing the serial number of Major Barker's aircraft, *E8102*, was reported to be in official service in Canada, but the only Snipe to acquire an official Canadian identity was *E7649* which, as G-CYDZ, was taken on strength on 11th February 1921, having come from the R.A.F. at Washington; this Snipe was deleted on 22nd October 1923, after a crash.

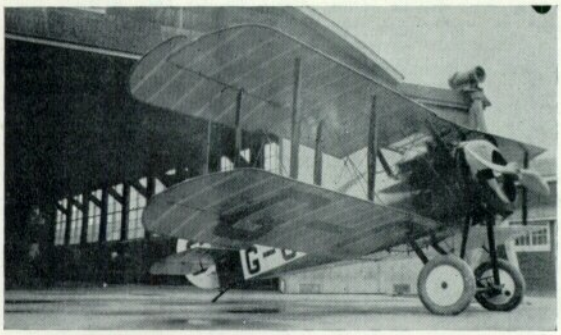
A number of Snipes had gone to the U.S.A., and several were advertised for sale there in the early 1920s. Only one was tested officially at McCook Field with the project number P-149 and the U.S. Air Service number 94016. This aircraft may have been in existence as late as 1926. It is believed that at least one Snipe had the American civil identity *N-6949* in 1929.

And it is in North America that the only known Snipes survive; both are airworthy. *E6938* was patiently restored by Jack Canary and is now in Canada; another, now marked *E8100*, is flown by Cole Palen.

© *J. M. Bruce, September, 1965.*

Originally J455, *this Snipe had the British civil identity G-EAUW. It was flown in the 1920 Aerial Derby by W. L. Jordan and was fifth in the race.* (Photo: Flight International)

G-CYDZ (ex E7649*) was the only Snipe to have a Canadian official registration. It is here seen at Camp Borden in 1923, fitted with oversize wheels.* (Photo: K. M. Molson)



Examples of Snipes Used by Squadrons:

Wartime

No. 43 Squadron, R.A.F.—E8000, E8004, E8041, E8165, E8264 (aircraft "F"), *F2387.*
No. 208 Squdaron, R.A.F.—E6175 ("S"), *E8042, E8132* ("D"), *E8162, E8167, E8270* ("V"), *F2336.*
No. 4 Squadron, A.F.C.—E7362, E8022, E8074, E8099, E8121, E8265.
No. 78 Squadron, R.A.F.—E8076.

Post-war

No. 1 Squadron—E6960, E7715, E8249, H4867, H4885, H8692.
No. 17 Squadron—E6544, E6862 (two-seater).
No. 19 Squadron—E7605, E8245.
No. 25 Squadron—F2485.
No. 32 Squadron—E6268.
No. 37 Squadron—F2390.
No. 43 Squadron—E7565 (also by No. 1 Squadron), *F2435.*
No. 56 Squadron—E6964, E7522, E7639, E7647.
No. 70 Squadron—E8057 ("14"), *F2351* ("18"), *F2367* ("12").
No. 112 Squadron—E6643, E6839, E6842, E6844, E6848, E7429.
No. 143 Squadron—E6843.

SPECIFICATION

Power: 150-h.p. Bentley B.R.1 (first prototype only); 230-h.p. Bentley B.R.2; 200-h.p. Clerget-Blin 11Eb; 320-h.p. A.B.C. Dragonfly (*B9967* only); 360-h.p. A.B.C. Dragonfly Ia (*E7990* only).

First Prototype

Dimensions: Span 25 ft. 9 in.; length 18 ft. 9 in.; height 8 ft. 3 in.; chord 5 ft.; gap 4 ft. 3 in.; stagger 17 in.; dihedral, originally designed as 2 deg. 30 min., aircraft built with 4 deg.; incidence 2 deg.; span of tail 8 ft.

Production Snipe

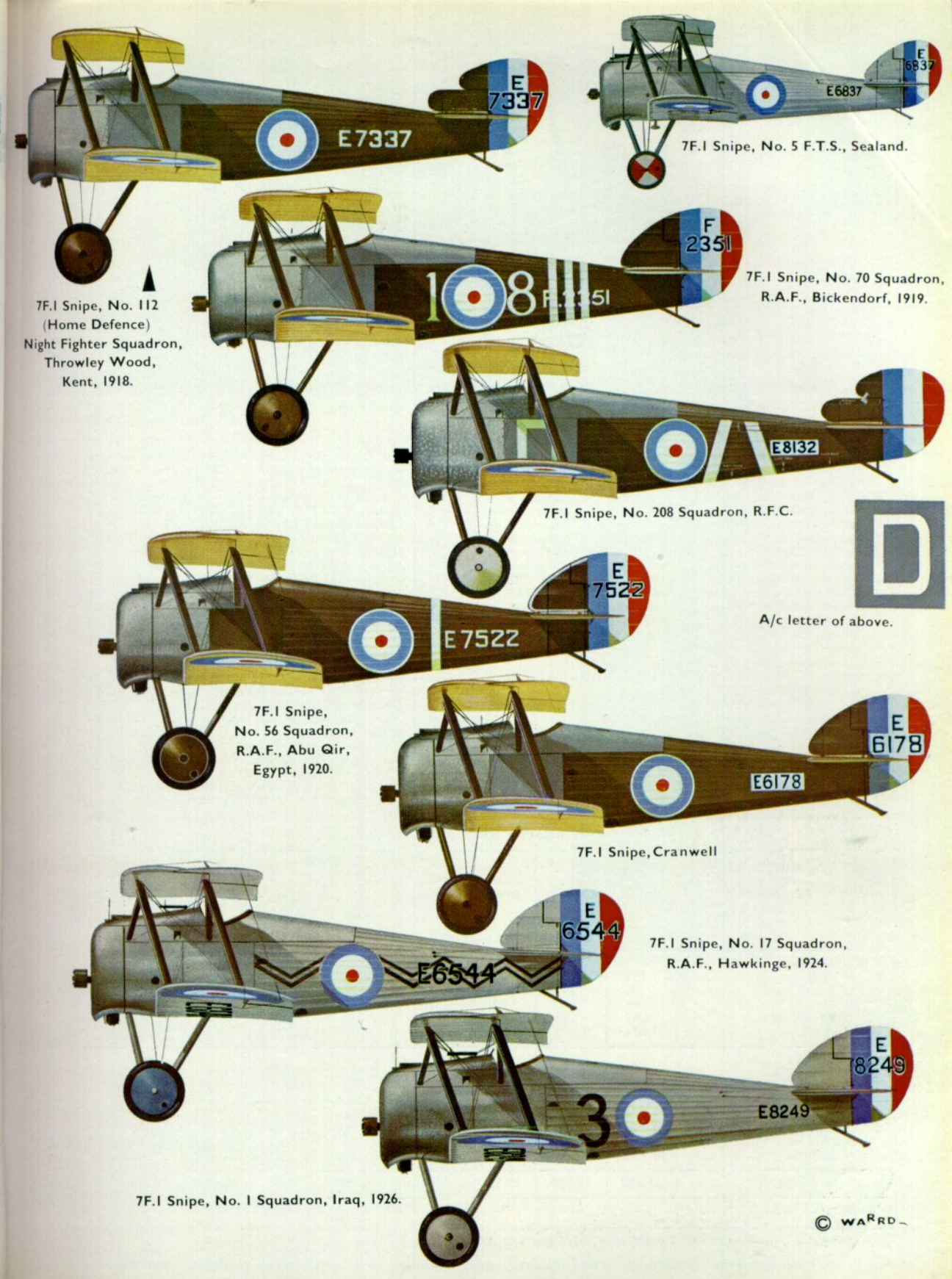
Dimensions: Span 30 ft. with plain ailerons, 31 ft. 1 in. (upper) with balanced ailerons; length 19 ft. 2 in. with first rudder, 19 ft. 10 in. with final rudder; height 9 ft. 6 in.; chord 5 ft.; gap 4 ft. 3 in.; stagger 16 in. (17 in. on *B9965*); dihedral 4 deg.; incidence 1 deg. 50 min.; span of tail 9 ft. 2 in.; wheel track 5 ft.; tyres, Palmer 700 ×75 mm. (750 × 125 mm. on Snipes at flying training units from 1925 onwards); airscrew diameter (Lang 4040) 9 ft. 1 in.

First Prototype

Areas: Wings 230 sq. ft.; ailerons, each 9·5 sq. ft., total 38 sq. ft.; tailplane 14 sq. ft.; elevators 10·5 sq. ft.; fin 3 sq. ft.; rudder 4·9 sq. ft.

Production Snipe

Areas: Wings 256 sq. ft. with plain ailerons, 271 sq. ft. with balanced ailerons; ailerons, each (plain) 10 sq. ft., total 40 sq. ft.; each upper (balanced) 12·5 sq. ft.; total 45 sq. ft.; tailplane 15 sq. ft., elevators 11 sq. ft.; fin, first form 1·85 sq. ft.; final form 2·75 sq. ft.; rudder, first form 6·6 sq. ft., final form 9 sq. ft. (*continued on page 12*)


E 7337
E7337
7F.1 Snipe, No. 112 (Home Defence) Night Fighter Squadron, Throwley Wood, Kent, 1918.
E 6837
E6837
7F.1 Snipe, No. 5 F.T.S., Sealand.
F 2351
108
7F.1 Snipe, No. 70 Squadron, R.A.F., Bickendorf, 1919.
E8132
7F.1 Snipe, No. 208 Squadron, R.F.C.
D
A/c letter of above.
E 7522
E7522
7F.1 Snipe, No. 56 Squadron, R.A.F., Abu Qir, Egypt, 1920.
E 6178
E6178
7F.1 Snipe, Cranwell
E 6544
E6544
7F.1 Snipe, No. 17 Squadron, R.A.F., Hawkinge, 1924.
E 8249
3
E8249
7F.1 Snipe, No. 1 Squadron, Iraq, 1926.
© WARRD

Snipe of No. 25 Squadron over Constantinople, 1923. Only the starboard Vickers gun was in place when this photograph was taken. (Photo: Ministry of Defence)

Production: Known contracts for Snipes total 4,515 production aircraft, in addition to the prototypes. The number of aircraft actually built fell far short of this figure, however. By the end of 1918, 497 Snipes had passed their final inspection, but production under some contracts continued until 1st March 1919. The total of completed aircraft cannot be determined, but at least 1,567 production Snipes are known to have been delivered.
Sopwith Aviation Co. Ltd., Canbury Park Road, Kingston-on-Thames—B9962–B9967, E7987–E8286, F2333–F2532, F7001–F7030 (ordered as Snipes, delivered as Dragons), *H4865–H5064, J3617–J3916* (ordered as Snipes, production as Dragons).
Barclay, Curle & Co. Ltd., Whiteinch, Glasgow—J3917–J3991.
Boulton & Paul Ltd., Rose Lane Works, Norwich—E6137–E6536, J451–J550.
British Caudron Co. Ltd., Broadway, Cricklewood, London, N.W.2—J651–J680, J2392–J2541.
Coventry Ordnance Works Ltd., Coventry—E6537–E6686, F9846–F9995.
Gloucestershire Aircraft Co. Ltd., Sunningend Works, Cheltenham—J3042–J3341.
Grahame-White Aviation Co. Ltd., Hendon, London—J2542–J3041.
Kingsbury Aviation Co. Ltd.—J6493–J6522.
March, Jones & Cribb Ltd., Leeds—J301–J400, J681–J730.
D. Napier & Son Ltd., Acton, London, W.—E6787–E6936.
National Aircraft Factory No. 3, Aintree, near Liverpool—J4092–J4591.
Nieuport & General Aircraft Co. Ltd., Langton Road, Cricklewood, London, N.W.2—E6937–E7036, H8513–H8662 (allotted for Snipes but changed to Nighthawks).
Portholme Aerodrome Ltd., St. John Street, Huntingdon—E8307–E8406, H8663–H8762.
Ruston, Proctor & Co. Ltd. (*later Ruston, Hornsby & Co. Ltd.*), *Lincoln—E7337–E7836, H351–H650.*
Armament: Two fixed 0·303-in. Vickers machine guns with Constantinesco C.C. synchronising mechanism, Aldis and ring-and-bead sights. Four 20-lb. Cooper bombs in racks under the fuselage.

Service Use

Wartime—France: R.A.F. Squadrons Nos. 43 and 208; Major W. G. Barker's Snipe attached to No. 201 Squadron; No. 4 Squadron, Australian Flying Corps; at least two Snipes with No. 45 Squadron, November 1918. *Home Defence:* No. 78 Squadron.
Post-war: R.A.F. Squadrons Nos. 1, 3, 14, 17, 19, 23, 25, 29, 32, 37, 41, 43, 45, 56, 70, 80, 111, 112, 143. Two-seaters used by Squadrons Nos. 1, 3, 17, 19, 29, 32, 41, 56 and 111; also at Central Flying School, Upavon, No. 1 F.T.S. Netheravon, No. 2 F.T.S. Duxford, R.A.F. Base Leuchars.

WEIGHTS AND PERFORMANCE

Aircraft	B9964	B9965	B9966	E7987	E8006		Mk. Ia	With Hydro-vane	With Dragon-fly Engine
					New	After 24 hrs. Flying			
Weights (lb.):									
Empty	1,153	1,212	1,240	1,305	1,312	1,312	1,329	1,349	1,405
Military load	86	349	150	185	185	185	231	246	203
Pilot	180	180	180	180	180	180	180	180	180
Fuel and oil	255	251	380	345	343	343	531	346	344
Loaded	1,674	1,992	1,950	2,015	2,020	2,020	2,271	2,121	2,132
Max. speed (m.p.h.):									
At 10,000 ft.	—	124·5	118	119	121	115	114	111	—
At 15,000 ft.	119	113·5	112·5	109·5	113	107·5	103	—	141
Climb to:	m. s.	m. s.	m. s.	m. s.	m. s.	m. s.	m. s.	m. s.	m. s.
6,500 ft.	4 10	5 00	4 55	5 00	5 10	5 40	7 00	6 30	—
10,000 ft.	7 30	8 45	8 50	8 55	9 25	10 20	12 35	11 55	7 30
15,000 ft.	14 50	17 35	17 45	17 35	18 50	20 40	32 5	—	—
Service ceiling (ft.) ...	21,500	19,500	19,500	20,500	19,500	20,000	15,000	17,300	25,000
Endurance (hours) ...	—	—	3¼	3	3	—	4½	—	—

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